

We Claim:

1. A device for emission of laser radiation, comprising:

at least one semiconductor laser having:

a resonator; and

a pumped active zone disposed within said resonator, said zone being subdivided into at least two spatially separated active zones by free-radiation regions without lateral wave guidance.

2. The device according to claim 1, wherein:

said at least one semiconductor laser is at least two semiconductor lasers;

said semiconductor lasers:

have at least one end;

are disposed in series; and

have sides and an antireflection-coating at least on one of said sides;

said semiconductor lasers have outer mirror elements at said end of said semiconductor lasers disposed in series; and

said outer mirror elements forms said resonator.

3. The device according to claim 2, wherein said semiconductor lasers are two surface-emitting lasers disposed at a distance from one another and have antireflection-coated top sides facing one another.

4. The device according to claim 2, wherein said semiconductor lasers are two surface-emitting lasers disposed at a distance from one another;

said lasers have antireflection-coated top sides; and

said top sides face one another.

5. The device according to claim 2, wherein said semiconductor lasers are two broad-stripe lasers disposed at a distance from one another and have antireflection-coated end faces facing one another.

6. The device according to claim 2, wherein said semiconductor lasers are two broad-stripe lasers disposed at a distance from one another;

said lasers have antireflection-coated end faces; and

said end faces face one another.

7. The device according to claim 5, wherein said lasers have a substrate and are formed on said substrate.

8. The device according to claim 5, further comprising a substrate, said lasers being formed on said substrate.

9. The device according to claim 2, wherein said semiconductor lasers have optical axes and said semiconductor lasers are oriented with said optical axes parallel to one another.

10. The device according to claim 2, wherein said semiconductor lasers are disposed from one another at a distance between approximately 1 μm and approximately 10 m.

11. The device according to claim 9, wherein said semiconductor lasers are disposed from one another at a distance between approximately 1 μm and approximately 10 m.

12. The device according to claim 1, further comprising a frequency-selective element disposed in at least one of said free-radiating regions.

13. The device according to claim 12, wherein said frequency-selective element is a Bragg grating.

14. The device according to claim 1, further comprising an imaging optical element disposed in at least one of said free-radiating regions.

15. The device according to claim 5, wherein:

at least one of said broad-stripe lasers have an exit window and an active zone defining an active zone plane; and

an imaging optical element is disposed in at least one of said free-radiating regions and is a cylindrical lens having a focal line lying in said active zone plane at said exit window.

16. The device according to claim 1, wherein at least one of said free-radiating regions is formed of a medium having a low absorption coefficient.

17. The device according to claim 1, further comprising a substrate, said lasers being formed on said substrate, at least one of said free-radiating regions being formed of a medium having an absorption coefficient less than at least one of the group consisting of an adjoining region and said substrate.

18. The device according to claim 5, wherein:

said pump zone has a band gap; and

at least one of said free-radiating regions is formed of a section having a band gap greater than said band gap in said pump zone.

19. The device according to claims 16, wherein:

said pump zone has a band gap;

said semiconductor lasers are two broad-stripe lasers disposed at a distance from one another and have antireflection-coated end faces facing one another; and

at least one of said free-radiating regions is formed of a section with a band gap greater than said band gap in the pump zone.

20. The device according to claims 17, wherein:

said pump zone has a band gap;

said semiconductor lasers are two broad-stripe lasers disposed at a distance from one another and have antireflection-coated end faces facing one another; and

at least one of said free-radiating regions is formed of a section with a band gap greater than said band gap in the pump zone.

21. In a semiconductor laser, an emission device for emitting laser radiation, comprising:

a resonator; and

a pumped active zone disposed within said resonator, said zone being subdivided into at least two spatially separated active zones by free-radiation regions without lateral wave guidance.